

MICROFLUIDIC DEVICES FOR ELECTROPHORETIC ANALYSIS OF MATERIALS

ABSTRACT OF THE DISCLOSURE

The present invention provides a microfluidic system for fast, accurate and low cost electrophoretic analysis of materials in the fields of chemistry, biochemistry, biotechnology, molecular biology and numerous other fields. Light from periodically spaced regions along a channel in the microfluidic system are received by a photodetector. The intensity of light received by the photodetector is modulated by the movement of species bands through the channel under electrophoretic forces. By Fourier analysis, the velocity of each species band is determined and the identification of the species is made by its electrophoretic mobility in the channel.